CHAPTER III

RESEARCH METHOD

This chapter presents the research methodology used in this research. It comprises research design, subject of the research (population, sampling, and sample), research instrument, validity and reliability testing, technique of data collection, and technique of data analysis.

A. Research Design

Research design is commonly defined as the way how the researcher gets the valid data of the research. In this research, the researcher uses quantitative approach and the design employed is correlational research. According to Ary (2010:22) quantitative research uses objective measurement to gather numeric data that are used to answer questions or test predetermined hypotheses. It generally requires a well-controlled setting. In addition, Creswell (2012:619) correlational research are quantitative designs in which investigators use a correlation statistical technique to describe and measure the degree of association between two or more variables or sets of scores.

In this research, the researcher wants to know whether the correlations between two variables were really existed or not. Thus, the correlational research design was the most appropriate research design to answer whether or not ten

grade students' rewriting story has correlation to the writing ability in narrative English text.

B. Variable

As stated by Ary (2010:37) variable is a construct or a characteristic that can take on different values or scores. In this research, the variables are rewriting story mastery and writing ability. Both narrative text mastery and writing ability are belongs to independent variable.

A. Population, Sample, and Sampling

1. Population

Arikunto (2010: 72) said the overall population is the subject of research. Agreeing with this notion, Sugiyono (2010:117) states that population is a generalization region involves an object or a subject that has quality and special characteristics in which chosen by the researcher to investigate and make conclusion. It means that population refers to large group. In this research the population was all students come from the first grade AK about 90 students' of SMK PGRI 1 Tulungagung in academic year 2018/2019.

2. Sample

In this research, it was necessary for the researcher to gather the data take from part of the population involving in this research. According to Lodico et al (2006: 143), "A sample is a smaller group selected from a larger population. Data is take from students among the population, which was then considered as sample. (Arikunto, 2010: 174), Sample is a part of the population which is investigated. It

means that sample was a representative part of population that taken to represent the research. The data was taken from students among the population, which was considered as sample. The researcher was conducting a sample by using a purposive sampling technique.

According to Cohen et al., (2007) in purposive sampling technique, sample is satisfactory to specific needs. The researcher used purposive sampling because the sample has been chosen for a specific purpose. The researcher took AK 1 as the sample because it suggested from English teacher in there and the researcher believe that they give sufficient information. The number of the sample for this research would automatically be less than the population, because it from 44 students from class X AK-1 as the sample who were widely spread from the 2 classes of first grade students. It consisted of 44 female.

B. Research Instrument

After the design of the research was designed, the next step was to draw up the instrument. Research instrument occupies the most important position on the field to obtain the data. Research instrument was defined as tool to measure the nature or social phenomena being observed (Sugiyono, 2014:148). Here, it is purpose as a tool to get the data. It is used to measure the students' rewriting story mastery and their achievement in writing narrative text for getting the data to prove the theory.

This research used a test as instrument writing. According to Ary et al (2010: 201), "Test is a set of stimuli presented to an individual in order to elicit

responses on the basis of which a numerical score can be assigned". In this case, the researcher gave one test namely writing test to get the data or information. The form the writing test is subjective test.

The first writing test, the researcher required all of students to write down a story exactly in form of narratuve text but the topic is about their favorite movie or short movie. The allocation of time is for about 35 minutes. For second writing test, the researcher required the students to write down a story in form of narrative text and the topic is about movie that the researcher played in the class. The writing should be consisted of 100 words. All of writing work should be consisted of minimal three paragraph (Orientation, Complication, Resolution) The students have to finish their work in 35 minutes.

The grammar requested to be used was past tense include simple past tense, adjective, action verb, linking verb. By using, instrument the researcher obtained a value of the data or the results of student achievement, that these data will be processed to determine the relationship of rewriting story mastery to the achievement of writing narrative text in class X-AK 1 SMK PGRI 1 Tulungagung.

C. Validity and Reliability Testing

A research is always dependent upon measurement. There are two important characteristics that every measuring instrument should go through a process of validity and reliability check.

1. **Validity**

   Validity is the degree to which a test measure what it is supposed to measure. A common misconception is that a test is, or, is not valid. Validity is the most complex criterion of an effective test and the most important principle of language testing. It is the extent to which inferences made from assessment results are appropriate, meaningful, and useful in terms of the purpose of the assessment. A test should test what the writer wants to test. To measure writing ability, one might ask students to write in 25 minutes, and then simply count the words for the final score. Although it would be easy to administer (practical) and the scoring is quite dependable (reliable), it would not be considered a valid test of writing ability because there are no considered of comprehensibility, organization of ideas and other factors of writing ability Brown in Isnawati (2012:27).

   There are four types of validity; 1). Content validity, 2) criterion-related validity, 3) construct validity, 4) face validity. Content validity is a kind of validity which depends on careful analysis of the language being tested and a particular test. A test is said to have content validity if its contents constitutes a representative sample of the language skills, structures, etc. with which it is meant to be concerned (Hughes, 2003:26). In this research the researcher used content validity. In the first test, the students imagine a favorite movie to complete their narrative text writing. Second test, the researcher give them short movie and play it in the class then they must write the story from it. According to Arikunto (2010:

67), a test has content validity when the test measures a certain purpose that reflects the material which was given. the author asked the help of experts namely the English teacher to validate the research instrument (See appendix 3).

2. Realibility

An instrument that has reliable will produce the reliable data too. If the data related with the fact, so how many time the data taken, it will be same. The reliability shows the consistency and stability the measurement score (Sarwono,2006: 219). It means that reliability of instrument is needed to make sure that the instrument can be consistent if used in other time. Therefore, the instrument as the test was reliable. To gain the reliable the researcher use test retest. The researcher do try out done Tuesday, 19 March 2019 and it done again on Saturday, 23 March 2019. To calculate reliability for writing test the researcher use test retest by using SPSS 25.0. the table of data and the calculation are showed below:

Table 3.1 Score of Test Retest

Subject	First Score	Second Score
A	56	60
B	64	72
C	54	54
D	84	82
E	76	72
F	78	70
G	64	72
H	62	66
I	56	58
J	86	84

K	80	78
L	52	54
M	78	74
N	66	68
O	74	76
P	82	80
Q	58	62
R	60	60
S	64	68
T	62	72

Based on the data above, the result of SPSS version 25.0 for windows is showed

below:

Table 3.2 Test Retest Reliability

Correlations

		First Score	Second Score
First Score	Pearson Correlation	1	,915**
	Sig. (2-tailed)		,000
	N	20	20
Second Score	Pearson Correlation	,915**	1
	Sig. (2-tailed)	,000	
	N	20	20

**. Correlation is significant at the 0.01 level (2-tailed).

The result of calculation showed reliability coefficient was 0.915 and the
ideal reliability coefficient is 1. In this research the calculation was near to 1, it
means the instruments of this research was reliable because 0.915 closer the
reliability coefficient to 1.

D. Normality Testing

Normality test is used to test whether a variable is normal or not. Normal here means if the data have a normal distribution. The main reason of conducting normality testing in a research is that it is necessary for the researcher to know that the population or data involved in the research is in normal distribution. To test the normality of the data can use the One Sample Kolmogorov-Smirnov test with the provision that if Asymp. Sig > 0,05, the data were normally distributed (Asmarani, 2008:234).

E. Data Collecting Method

A researcher must develop a new test to measure the specific knowledge, skills, behavior, or cognitive activity that is being studied. In this research, the researcher tries to know the students' ability in writing narrative text by giving short movie serie and administering test. In conducting this research, the researcher used test to get scores of students' rewriting story mastery and students' achievement in writing narrative text. The narrative test consists of two tests. The first and second test is almost same idea, but the differences in the topic itself.

In data collecting method, the researcher conducted pre test and post-test for short movie by using administering test. The aims of using these techniques are to know the difficulties that the students have in understanding narrative, to know to what extent the teaching of narrative using short movie can improve students' writing achievement, to gather information and to find a simple way for

the students to produce a text. The pre test was used to find out the numerical value of students before a post test that uses short movie is done. Post-test was used to find out whether the media used by the researcher was appropriate and made it easier for students to make a text. The researcher wants to know about this media it can make better in studying writing text especially narrative text or not.

F. Data Analysis

The purpose of this research was to measure the correlation between students' rewriting story mastery and students' achievement in writing narrative text. The data of this research were analyzed by using statistical analysis. Statistic technique for determines relation between pairs of score known as correlative procedure (Arikunto, 2010:143). To measure the relation between two variables, the researcher used bivariate correlation by using Pearson Product Moment formula. The researcher used it because the data obtained from two variables was exposed in terms of quantitative scores and the data was using interval scale. The variable of this research were students' rewriting story mastery and their achievement in writing narrative text. It meant that this research was for identifying the correlation between students' rewriting story mastery and their achievement in writing narrative text. For the nature of a correlation study is association, were independent variables.

However, to make easy in calculating the data, the researcher used SPSS 25.0 in processing the data to get the correlation both of the variable. Correlation can result in positive or negative numbers. If the coefficient correlations are close

to 1, it means the relation between the two variables is stronger. Whereas, if the correlation number is closed to 0, it means that the relationship between two variables is weaker. The researcher determined the table interpretation of product moment scales, as follow:

In order for you to calculate the Pearson product moment test manually, then identify the Pearson product moment test formula first. The following is the Pearson product moment test formula:

$$r_{xy} = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{\{n\sum X^2 - (\sum X)^2\}\{n\sum Y^2 - (\sum Y)^2\}}}$$

Where:

rxy: Pearson r correlation coefficient

n: number of samples/observations

x: first independent variable / variable

y: dependent variable / second variable.

Table 3.3 Interpretation correlation by Arikunto

Correlation value (r)	Interpretation
0,000 – 0,200	Very low correlation
0,200 – 0,400	Low
0,400 – 0,600	Moderate
0,600 – 0,800	Enough
0,800 – 1,000	High correlation

From this formula, it could be gotten the correlation coefficient value (r) of the two variables. By the interpretation table, the researcher can conclude the strength of the correlation.